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OVARIOTOMY;

IS IT—OR IS IT NOT—AN OPERATION JUSTIFIABLE UPON THE COMMON PRINCIPLES OF SURGERY?

ARE—OR ARE NOT—CAPITAL OPERATIONS IN SURGERY JUSTIFIABLE TO THE EXTENT GENERALLY PRACTISED?

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"In truth there are Brothers who will brag of the many they have dismembered; but they that truly understand Amputation and their Trade, well know how villainous a thing it is to glory in such a Work,—it being more for your credit to save one Member than to cut off many."—*Richard Wiseman's 6th Chirurgical Treatise.*

"Cut off—
Unshriven, unanointed, unaneled:—
If thou hast nature in thee, bear it not."
Complaint of the Ghost in Hamlet.

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OVARIOTOMY.

[*The following remarks are extracted from a more full Report (published in the Monthly Journal of Medical Science for January* 1846,) *of an oral discussion on Ovariotomy, raised at the meeting of the Edinburgh Medico-Chirurgical Society for December* 17, 1845, *in consequence of a case of the operation communicated to the Society by Dr Bennett.*]

Professor Simpson stated, that he believed ovariotomy quite unjustifiable in many of the cases in which it had been had recourse to, but in a few rare instances, like that of Dr Bennett's patient, quite as justifiable as most of the operations performed in surgery for chronic affections. And it appeared to him that two circumstances prevented ovariotomy from obtaining a fair consideration and fair trial, especially with professed surgeons. *First*, the diagnosis and the operation were, under the existing divisions and arrangements of practice, undertaken by two different sets of practitioners—the former by the obstetric physician, and the latter by the operating surgeon. It was, perhaps, the only capital operation in which the surgeon was now required to proceed upon the diagnostic knowledge of another party; and no one was to be blamed if he felt a natural repugnance to incur so serious a responsibility on such grounds. *Secondly*, surgeons, as a class, still confessedly allowed themselves to be greatly bound and swayed by the trammels of authority, and the mere fact that some of the highest names in surgery had once declared (with or without due investigation) against ovariotomy, is with most others an ample and satisfactory reason for totally rejecting the operation. In the same way, but in an opposite direction, the leading authorities in the surgical world having agreed to consider ligature of the *arteria innominata* as a legitimate operation, it has now been repeatedly performed. But what has been the result? Why, the vessel has been tied some twelve times, according to Mr Phillips,—it might be oftener, or it might not be so often,—but, at all events, *as often as* the operation had been performed, it had proved fatal; and yet, because it had been decreed proper and justifiable by authority, we find it in the very last text-books on surgery still commented on as such; whilst ovariotomy, as proving fatal in one out of every two or three cases, was loudly denounced as improper and unjustifiable. In the important department of surgery, such inconsistency would doubtlessly betimes become rectified—when (as had been long the case in medicine and midwifery) the dogmatism of mere facts and experience came to be more respected than the dogmatism of mere opinion and authority.

The diseased condition of the ovary, to which the operation of ovariotomy was particularly applicable, if applicable at all, was, in Dr S.'s opinion, that form of ovarian dropsy which was by far the most frequent of all, and consisted in multilocular cystic degeneration of the organ—the gelatiniform, or areolar cancer of some authors. All other forms of ovarian dropsy (as they were called) were rare in comparison to this; and to it all remarks, in such a discussion as this, principally or entirely applied. In most instances,—in nine cases out of ten,—this species of ovarian dropsy pursued, he believed, a regular progress onward, towards greater or less enlargement, insufferable distension, more or less repeated palliative tappings, frequently disintegration of the morbid structure, local irritation, constitutional exhaustion, and death. Generally, it took a series of years to run its course, but sometimes it passed through its phases and progress more ra-

pidly. We want a sufficient body of well observed facts to know the average duratoin and simple natural history of this, as of most other diseases. Some authorities averred that the disease occasionally went on for 20, 30, 40, or 50 years. Dr S. doubted entirely the truth of such alleged cases, and believed that abdominal tumours, with this history, were not affections of the ovary at all, (certainly not its cystic multilocular disease), but fibrous tumours of the uterus, which were often exceedingly chronic in their progress, and, as Dr S. had repeatedly seen, were very frequently mistaken for the ovarian affection under dispute. Again it had been as strongly averred that cases of multilocular dropsy of the ovary had been absorbed and cured. He equally and entirely doubted the validity of this observation. Errors in diagnosis would, he believed, account readily for all such therapeutical incredibilities. He had seen hysterical tympanitic distention of a portion of bowel, and collections of fæces mistaken for ovarian tumours; and these were certainly quite curable. He had, in several instances, seen also ovarian dropsy very perfectly simulated in form, figure, situation, &c. by large chronic inflammatory effusions in the cellular tissue of the pelvis and broad ligament, always commencing with and accompanied by inflammatory phenomena, and these, like similar inflammatory effusions elsewhere, were always more or less completely amenable to medical treatment. But he had no belief whatever that iodine, or mercury, or muriate of lime, or aqua potassæ, or diuretics, or deobstruents, or aught else, were capable of absorbing and removing the complicated structure and contents of a multilocular cystic tumour of the ovary. He would almost as soon believe that the head could be absorbed and removed by medicine. When the disease was accompanied with much local vascular action and congestion, the occasional loss of blood was certainly sometimes beneficial. But in the general run of cases of this malady, he had long come to the conclusion that we did all that was possible with medicine, when we kept the individual functions of the economy as near as possible to their individual standards of health. Break down the activity and vigour of the system by mercury or other debilitating medicines, and then the ovarian disease only too often progressed with double strides.

Seeing medicine was of so little direct use—what measures had surgery to propose? The cystic structure of the tumour had been tapped and injected in imitation of the treatment of hydrocele,—setons had been passed into it, and through it,—incisions had been made into its walls, &c., &c.; but all such operations were now, he believed, abandoned by general consent, as useless in their effects, and far too often fatal in their practice to admit at all of repetition. In fact two measures only were at the present day applied to the surgical treatment of the disease, namely, 1. Tapping; and, 2. Total extirpation. The first of these operations—tapping, was professedly adopted merely as a palliative measure—for the present relief of the patient—not for the cure of the disease. In a very few instances the tumour appears to become bound down by adhesions after tapping, and no reaccumulation takes place; but these cases are so very rare that in practising the operation we scarcely even venture to reckon upon the possibility of this occurrence. In some cases where the tumour is very large, but the cells small, and containing gelatiniform matter, tapping is of no use, and cannot in any degree evacuate or diminish its contents. Fortunately for the success of this operative procedure, the anterior and superior cell or series of cells were generally large, and dilated more than the others, in consequence of least resistance being opposed to their growth and distension in this direction. And tapping, when adopted, though a palliative measure only, was by no means so free from danger, as some practitioners think, and some writers would seem to allege. We had as yet no sufficient collection of data to shew its actual results. But Mr Southam had commenced the inquiry, by tabulating the results of twenty cases of the operation. Fifteen of these cases had been recorded by Drs Bright and Barlow, without apparently any view to such an investigation, and hence afforded the more valuable and unprejudiced evidence. Four of the 20 patients, or one in five, died of the effects of the first tapping. Four patients died of inflammation within a few days after the operation; three more died in

one month; fourteen in all died within 9 months after the first tapping. Of the remaining six, two died in eighteen months, and four lived from periods varying from four to nine years.

Paracentesis, whilst thus merely a means of *palliation*, was still a proceeding in which no inconsiderable amount of danger appeared to be incurred. Ovariotomy, on the other hand, was an operation which, if successful, was professedly a means for the perfect and radical *cure* of the disease. But it was undoubtedly a most serious and dangerous operation, and therefore was it warrantable or unwarrantable, when judged of by the *principles* applied by surgeons to the determination of the propriety of other capital operations in chronic diseases? Let us consider ovariotomy and the objections to it in this point of view; for by such a comparative test will the propriety or the impropriety of the operation be best ascertained and determined. The principal objections which Dr Simpson had heard urged against ovariotomy were as follows:

1. *It is an operation accompanied with great danger and mortality.*—All parties are ready to admit fully of this point. But it is by no means a matter decisive, as some think, of the impropriety of the operation. At all events, if ovariotomy is to be condemned and suppressed on this count, several of the legitimatized capital operations in surgery must be equally, or still more strongly, condemned on exactly the same charge; for it is in reality not more fatal than many of these operations, and even not so fatal as some of them. On this subject (the mortality accompanying capital operations in general), very erroneous views seem to be entertained by many members of the profession. The statement of a few simple statistical facts will serve to prove the position assumed, and may, perhaps, surprise those who have not directed particular attention to the subject. Dr Churchill, Mr Phillips, Dr Atlee, and Dr Cormack (see his Journal for May last), had each calculated the mortality in ovariotomy, from the cases on record, and came to nearly the same conclusion. Dr Simpson took Dr Cormack's results as being those of a writer against the operation, and hence his tables could not be suspected of any unfair leaning towards ovariotomy.

Out of 89 cases in which ovariotomy had been either performed or attempted, 34 sunk, or nearly 4 in every 10 patients died.

Out of 65 cases, collected by Dr Cormack, in which the operation had been perfected, 25 died, or between 3 and 4 out of every 10 patients were lost.

Now Malgaigne has shown, that out of 852 amputations of the extremities of all kinds (including those of the fingers and toes), which were performed in the Parisian hospitals from 1836 to 1841, 332 died, or about 4 out of every 10 proved fatal.

Among these, out of	201	amputations of the	thigh,	126 died, or	6 in every	10.
... ...	192	...	leg,	106 died, or	$5\frac{1}{2}$ ...	10.
... ...	91	...	arm,	41 died, or	$4\frac{1}{2}$ ...	10.

Of the amputations of the thigh, in 46 cases the operation was performed for severe injury of the limb: of these 34 died, or more than 7 out of every 10.

When we looked to the results of amputation nearer home, the results were not much more encouraging. In the Glasgow Infirmary, from 1795 to 1840, Dr Lawrie has shown that out of 276 amputations performed, 101 proved fatal, or nearly 4 in 10 died.

Among these, out of	128	amputations of	thigh,	46 died, or	$3\frac{1}{3}$ in every	10.
... ...	62	...	leg,	30 died, or	5 ...	10.
... ...	53	...	arm,	21 died, or	$4\frac{1}{2}$ ...	10.

In the Edinburgh Infirmary, during the four years commencing July 1839, there occurred 72 amputations of the thigh, leg, shoulder-joint, arm, and fore-arm. Of the 72 patients, 37 recovered and 35 died,—or nearly 5 in every 10. Of these amputations, 18 were primary. Out of 4 primary amputations of the leg, one patient recovered and 3 died. Out of 4 similar amputations at the shoulder-joint, 1 recovered, and 3 died. There was one primary amputation of

the arm; the patient died. There were eight primary amputations of the thigh; all the eight patients died. (See Dr Peacock's Official Reports.)

Mr Phillips has collected the histories of 171 cases in which the larger arteries of the body were tied: of these 57 died; or about $3\frac{1}{3}$ in every 10. Dr Inman has collected 199 cases of these operations; 66 died, or about $3\frac{1}{3}$ in every 10. Out of 40 cases of ligature of the subclavian artery which he has tabulated, 18 proved fatal, or nearly 5 in every 10 died.

In his work on hernia, Sir A. Cooper records 36 deaths among 77 operations for that disease, or nearly 5 in every 10 died. Dr Inman has collated 545 cases of operation for hernia; 260 proved fatal, or nearly 5 in every 10 of the patients died.

In the earlier years of life lithotomy is comparatively a safe and legitimate operation, and few die. But it is quite different when the operation is submitted to at 40 years of age, and upwards. At and above this term of life, Dr Willis has shown, from numerous statistical returns, that from 2 to 5 out of every 10 operated upon die.

Even what we deem slighter operations, are sometimes attended in the absolute by no inconsiderable danger to life. Out of 95 cases of excision of the mamma, referred to in Dr Cormack's Journal for February 1843,—20 died, or 2 in every 10. In how many cases of the remaining 75 would the disease inevitably return and ultimately destroy the patient?

Ovariotomy then is fatal in the proportion of about 35 or 40 in every 100 operated upon; but in most capital operations we singly have as high or even a higher mortality than 35 or 40 per cent. Amputation of the thigh is higher. So is amputation of the arm. Ligature of the subclavian, for aneurism, is higher. Tying the innominata is fatal in every case. The operation for hernia has a higher mortality. Lithotomy is as fatal in most hands after the middle term of life. Even amputation of the leg below the knee is scarcely more safe, or at all events as many, or more, die after amputation of the leg, in the hospital practice of Paris and Glasgow, as die after ovariotomy.

It had been foolishly objected to the statistics of ovariotomy, that we did not know all the unsuccessful cases. Dr S. believed that the ascertained statistics regarding it were as full and complete as the statistics regarding any other capital operation. It was too serious and too startling an operation for any cases of it to remain easily hid. On the other hand, it could be readily shown that the statistics of our major surgical operations were not always reported in the most faithful manner, and so as to give the most accurate results. Malgaigne candidly confesses as much in regard to the elaborate statistics which he has collected of various surgical operations from different hospitals.

The existing results regarding ovariotomy would, probably, be on all hands allowed to demonstrate one point, namely, that exposure of the cavity of the peritoneum was not so dangerous a proceeding as was formerly dreamed of by pathologists. Surgeons have exposed it often in hernial operations, and even left ligatures upon its omental vessels when necessary, and not unfrequently with impunity. In 1842–43, a portion of the omentum was removed in six operations for hernia at St George's Hospital, London. "In some of the cases, two ligatures, each embracing one-half of the omental mass were applied; in the other cases, ligatures were applied to all the bleeding vessels." Five of the six patients recovered. One died comatose, a few hours after the operation, from disease of the brain. (Hewett in Medico-Chirurgical Transactions, vol. 27.) But still, it must be confessed, extreme dread of all such abdominal surgery was, and probably is, the prevailing idea. The comparative success of the Cæsarean section in the hands of Continental accoucheurs, might almost have taught us a different lesson, the peritoneal cavity in that operation being of necessity freely opened up; and we may daily see the same done upon the females of some of our domestic animals, with remarkable impunity, in the coarse operation of spaying.

2. *The ultimate results of cases of ovariotomy were alleged to be unknown and*

unfavourable. It was urged that the reports of cases had been published with too great haste, and before the final effects could be known months and years afterwards. Great weight had been attached to this argument in the question of ovariotomy. But it probably would be found to tell against other capital operations with much more truth and effect than against ovariotomy. In how few instances were the published reports of capital surgical operations carried beyond a few weeks? And what a large proportion did die within a short period after escaping from the more immediate consequences of the operation for aneurism, and stone, and cancer, and amputation,—and that with very broken and imperfect health too, during the interval. The primary history of cases of these operations was given, not yet their ultimate history. Dr Simpson at the same time adduced various facts, to show that as far as regarded ovariotomy, the allegation did not in reality hold good. The process of reparation after ovariotomy is, say some, too great to be accomplished with health and safety. Theory may argue so—but facts here give a direct and practical denial to theory, by demonstrating the reverse to be true. In one of the first cases operated on (Emiliani's in 1816,) the patient has since become the mother of five living children,—an ample proof of the completeness of the cure. Dr Simpson read a note from Dr Clay of Manchester, stating the present condition in (14th December 1845) of the patient that he had operated upon two or three years back. His first patient, operated on 12th September 1842, "continues quite well, and follows her household duties with ease and comfort." A patient subjected to ovariotomy on the 25th September 1842, "is at this time perfectly well, and capable of greater exertion than most women of her age, viz. 60." Regarding a third patient operated upon in November 1842, Dr Clay states "I saw this case a few days ago on account of a polypus of the nose—in every other respect she is quite well." A patient operated upon in August 1843, "is at this time perfectly well, saw her a few days ago." Dr Clay operated on two cases in October 1843, "the first remains at this time quite well,"—the second reports herself "in better health now than in any part of her former life." A case was operated upon in November 1843, "I have," says (Dr Clay) "seen this woman frequently of late whilst attending other branches of the family;—she is quite well;"—and so on with regard to some others.

3. *It was argued that the extirpation of the affected ovary would not necessarily effect a perfect cure of the disease, or secure the patient against its return.*—This certainly holds true of the diseases for which several of the major operations in surgery were performed, but as certainly it did not hold true of multilocular dropsy of the ovary. The surgeon amputates a limb, or excises a tumour for some form of carcinomatous disease, hazarding more or less the life of his patient for the temporary removal of a diseased action which is almost perfectly certain to recur. He ties the subclavian for aneurism—but is it not a disease which is very liable to co-exist in different vessels at the same time, or to form consecutively in different parts—and if the patient escapes the great and immediate dangers of the operation, has he any surety against its reappearance elsewhere? You amputate the thigh to get rid of a scrofulous or tubercular knee-joint. But in how many cases is local tubercular disease the mere result of a general diathesis, that ere long will betray itself in some other part or organ. Dr Simpson thought it a point of the highest practical moment to consider that, on the contrary, the pathological nature of multilocular disease of the ovary was such that it had no tendency to recur after its complete removal. From the character of its morbid structure, and its clinical history, it was certain that it presented no liability to spring up again, like malignant or tubercular disease, in the same locality—or in distant and in different organs of the body. The other ovary might be partially affected, and if so, might require removal along with the first—a step which at the time would probably not add much to the absolute danger of the operation—seeing the abdomen was once opened. Do not surgeons operate for popliteal aneurism, when it is present in both limbs, even with the additional chances of an analogous diseased condition of the ves-

sels existing internally. Probably it will be found that a surgeon would more rarely require to repeat ovariotomy, in consequence of the remaining ovary subsequently becoming diseased, than he now requires to repeat lithotomy, in consequence of a second or a third stone forming after a time in the bladder.

4. *Ovarian disease* (*it is averred*) *does not produce such dangerous and urgent symptoms as to demand an operation.*—Dr Simpson said that he had already adverted sufficiently to the dangerous and ultimately fatal tendency of the common multilocular dropsy of the ovary. He had at present charge of one case, where an enormous ovarian tumour produced occasional most intense suffering, in the form of severe abdominal pains and spasms resembling the agonies of labour. In many cases where it had reached a large size, it more or less incapacitated the patient, by its simple weight and volume, from following the ordinary duties belonging to her station; and, if poor, threw her upon the bounty and charity of others. In most it was, after a time, liable to be attended with local attacks of irritation and inflammation, fever, &c., or produced dyspnœa, difficult progression, &c.

Dr S. doubted if, in many cases operated upon, of aneurism or necrosis, or ulcers, &c., supposed to demand amputation, &c., the suffering or the incapacity from the duties of life, were greater than in a large proportion of ovarian cases. But, argue the surgeons, *we* operate early in aneurisms, &c., because they continue to increase,—the same is true of ovarian tumours; because the aneurismal swelling is, after a time, liable to affect the structure of neighbouring parts, and render late operative interference less successful,—the same is true of ovarian tumours; because with the aneurismal disease the constitution will sympathise and become debilitated,—the same is true of the ovarian tumour; because the aneurism may burst and endanger life,—the same is true of ovarian tumours. Dr Simpson had, two years ago, seen one burst into the peritoneum, and prove fatal; its parietes were eroded by small internal ulcerations at several points, and at last had given way. Any argument urging haste in the one case, would, he feared, equally apply to the other. On the contrary, would proper palliative treatment applied to *local* aneurisms not stay their progress, and make them as chronic, if not more so, in their course, than multilocular tumours? Mr Fergusson has lately stated that he has watched one case of axillary aneurism "for several years" without it increasing. And aneurisms sometimes are, at last, spontaneously cured; much oftener, Dr S. believed, than ovarian dropsies. Take another case that happened in the Hospital practice this morning. A man applies with stricture, and symptoms of stricture only. On passing a small bougie, a stone is struck in the bladder, and the patient is forthwith advised to submit his life to all the perils and consequences of lithotomy, though he has no suffering traceable to the calculus. Would it be justifiable to advise a patient with an ovarian dropsy, giving her no trouble, to submit in the same way to ovariotomy? Dr S. most assuredly thought it would be utterly unwarrantable. And the palliative treatment for urinary deposits and calculus was, (it must further be recollected,) now far more advanced than the palliative treatment of ovarian dropsy. A calculus of this kind would not likely increase so rapidly as to destroy the patient in five or ten years. An ovarian tumour very likely would do so. And sometimes, as in this case, an urinary calculus does not really give rise to such uneasiness as to demand any very active palliative treatment. Do we not sometimes see calculi in the bladder after death, which have never given rise to any marked symptoms during life? Again, does not the operation for the obliteration of the varicose veins of a limb sometimes prove speedily fatal, and yet the disease itself is one easily palliated by rest and bandages. Besides, this recognized legitimate surgical operation for varicose enlargement was not only dangerous to life, but, he feared, useless in its effects. In most cases, at least, the disease was as bad again in a few months as it was before surgical interference was adopted. Did we not sometimes see surgeons amputate the limb, when it was merely the seat of simple and benign, but untractable ulceration? And ulceration might be a very serious inconvenience to a labouring man; but

here we have a dangerous and often fatal operation performed for a disease which was not fatal nor dangerous in its own character, and that easily admitted of palliative treatment. Altogether, it appeared to Dr Simpson, that the question of *when* we should conscientiously deem ourselves entitled to practise ovariotomy, or any other dangerous operation for a chronic disease, was one that had hitherto received no sufficient attention. It was a question that probably must always be decided much upon the merits of each individual case, and in regard to which different minds may come to opposite and yet conscientious conclusions. It always embraced a difficult moral and professional problem, in cases where the required operation was, as in ovariotomy, ligature of the larger vessels, amputation, lithotomy, &c., directly and immediately dangerous to the life of our patient. It resolved itself in such a case into a question of this kind: *Am I conscientiously* ENTITLED *to inflict deliberately upon my own fellow-creature, with my own hands, the imminent and immediate chance of* DEATH, *for the problematical and prospective chance of his future improved* HEALTH *and prolonged* LIFE? In calculating what *amount* of danger of present death ought to be incurred for the hazard of future good, many secondary elements necessarily entered into the problem, —such as the existing chance of otherwise palliating the disease and prolonging life with certainty for months or years,—the extent of attendant suffering, —the probability of the affection recurring,—or already existing elsewhere, &c. &c. In such a calculation, the ideal glory of a successful operative result has probably been too often allowed to dazzle the calm judgment of both the operator and his patient, and the darker but equally truthful shades of the picture have been, for the moment, so far obscured and unseen. With the patient the stern reality of danger and death too frequently vanishes, here as elsewhere, before the strong hope of life. And the surgeon, like the soldier, is, in the computation of his successes, perhaps too liable to forget the actual amount of human suffering and human fatality through which these successes are obtained.

5. *It has often been argued against ovariotomy, that the operation, when begun, could not sometimes be completed from adhesions, &c.; or no tumour could be found.*—These circumstances were the results of imperfect diagnosis; and Dr S. adverted to the occasional difficulties connected with the discrimination of ovarian tumours, and admitted them to their full extent. He explained that he could scarcely conceive the repetition of some of these errors if due caution were adopted. If other means failed, an exploring needle would always certify the presence of a tumour, and its structure or nature; the uterine bougie would show if the tumour were situated in the uterus or ovary, &c. The chief and ruling difficulty at this moment was assuredly that of discovering the existence or not of adhesions of the tumour by false membranes, their extent, &c. If this point could by any measures be cleared up, it would remove one of the great, perhaps the greatest, existing objection to ovariotomy. Nor was it totally hopeless. One of the most sure and solid advances made by modern pathology was our gradual but great improvement in the physical diagnosis of the diseased states of different organs. Probably the next marked step in this path would be the detection of some measure or measures for improving our knowledge of the physical diagnosis of diseases of the abdominal viscera. It was not more extravagant to expect this, than thirty years ago it would have been extravagant to expect all the vast aid and certainty which we now derive from auscultation in the physical diagnosis of diseases of the chest; and he believed some important steps had been already made regarding the detection of ovarian adhesions by Dr Frederick Bird of London, and others. Dr Bennett's contribution was under this head of the highest pathological and practical value. As soon as the ovarian tumour in the case described by him was exposed, it was evident to all who had taken an interest in the question, that the accompanying ascitic effusion oozed by apertures from the interior of the ovarian tumour, and was a secondary result. But if, as Dr Bennett would, he doubted not, be able ultimately to show, it was possible to distinguish by microscopic characters between the fluid

of common ascites and the fluid of ascites thrown into the peritoneum through small ulcerated apertures in the walls of an ovarian tumour, it would clear up various points in a set of cases formerly surrounded with perplexing difficulties. It would enable us to detect the pathological cause and source of the great ascitic collections sometimes attendant upon comparatively small ovarian tumours. Cases with this complication (that is, ovarian tumours with apertures allowing their secretions to pass into the general peritoneal cavity) evidently in general ran a very rapid and fatal course. If these secretions were acrid and irritating, (as when mixed with inflammatory effusions from the walls of the cyst or cysts,) they might at once excite fatal peritonitis. This, however, was rare, and the exception to the rule. Usually the secreted fluid appeared to be blander, distilled slowly through the morbid openings in the parietes of the tumour, and, accumulating in the peritoneum, required ever and anon to be removed from that cavity by tappings, which soon became more and more frequent, and more and more exhausting. This variety was probably, Dr Simpson suggested, of all ovarian cases, that most surely justifying the adoption of extirpation. And besides, in these very cases, it was generally ascertainable whether there were adhesions or not, for the tumour was surrounded by a fluid medium, and hence admitted more easily of this point of diagnosis being made out by its mobility in that medium. Perhaps it was, on the other hand, unjustifiable in our present state of knowledge to operate where there were many adhesions, or any great want of certainty about the existence and extent of them; as it was, where the tappings, though many and frequent, did not, (as was seen in a few exceptional cases on record,) exhaust rapidly the powers of the patient, or threaten her life with any prospect of urgent or immediate danger.

But, admitting to their fullest extent the occasional difficulties which have been found to beset the diagnosis of ovarian tumours for operation, do we not meet with occasional difficulties of exactly the same kind in other surgical operations, and which do not yet deter surgeons from interfering? Is the trephine never used without detecting any effused blood, or pus, or depressed and fractured fragments of bone? In tying the carotid and subclavian and iliac arteries for aneurism, it has now repeatedly happened that all the great dangers of these operations had been submitted to most uselessly, the disease, during the operation or after death, being found not to be aneurismal at all,[1] and hence not at all curable by such a procedure; and, when aneurismal, the operation has been sometimes left incompleted—the vessel searched for either not being secured, or, as has happened with Dupuytren and others, it has been reached and fatally transfixed with the ligature, instead of being surrounded by it. Have not the antrum, and the mamma, and the testicle, &c., been sometimes found to be the seat of simple inflammatory and curable effusion, after all the usual operative measures for the removal of supposed malignant tumours from these localities had been commenced, or even completed. A surgeon had excised ten schirrous mammæ, and in every case with perfect success. In not one was there any return of the disease. Sir Benjamin Brodie was requested by this active operator to see a new case of schirrus which he had determined to remove. "It was nothing more," says Sir Benjamin, "than a chronic abscess of the breast, which he denominated schirrus."—*(Medical Gazette*, 1844.) Dr S. had seen amputation of the thigh performed by a celebrated surgeon for supposed scrofulous disease of the knee-joint, and where, on examining afterwards the amputated limb, no traces of such a disease could be found. Most of them had seen cases of diseased limbs threatened with, or actually condemned to the knife, and which yet afterwards got quite well, when surgical interference would not be submitted to by the patient. In some cases of hernia, is it not occasionally found impossible, as in some cases of ovariotomy, to finish

[1] During the discussion, Dr Spittal mentioned, that out of 59 cases, collected by Dr Norris, of ligature of the subclavian artery for aneurism, "in three no aneurism existed, and in two the tumour was mistaken for aneurism and punctured." Hence, in one out of every twelve of these cases, the diagnosis was perfectly wrong.

the operation and return the bowel in consequence of extensive morbid adhesions or other causes? Is not the stone sometimes found encysted in lithotomy, and for that or other causes its removal rendered impossible after the bladder is cut into? Is the operation for the removal of an incarcerated piece of necrosed bone not sometimes found impossible after it is begun? Grave errors have been committed in diagnosis in ovariotomy cases, in relation to the propriety and practicability of the operation, but he doubted if as grave errors were not as frequently committed in some other recognized capital operations. A much greater amount of caution was undoubtedly requisite on this head.

In summing up his statement, Dr Simpson allowed that ovariotomy was a most serious and dangerous operation; but at the same time he maintained, that surgeons in declaiming against it had used a series of arguments, all, or almost all, of which would equally, and some of them still more strongly, apply against those capital operations for chronic maladies, regarding the propriety of which they did not affect to entertain one single doubt, and which they every day performed without the slightest scruple. For his own part, however, he entirely doubted whether surgeons should resort to many of these operations, under the circumstances in which they often adopted them. He doubted whether, for example, they should at once subject a man to all the immediate and fearful perils of lithotomy and lithotrity, because he had a stone in the bladder which gave him little or no uneasiness, and which might allow him, under proper regimen and treatment, to live and perform the duties of life for a long series of years. He doubted whether, in a case of axillary, or carotid, or popliteal aneurism, slowly increasing, or not increasing at all, having some small chance of spontaneous cure, and having no inconsiderable chance of being followed or accompanied with the same disease in other parts of the arterial system, all the dangers of the ligature of the vessel nearer the heart, should be at once recklessly encountered. He doubted whether, in malignant or carcinomatous disease of the fore-arm or leg, amputation of the arm or thigh should be at once resorted to, with the hazard of death in a few hours or days in one out of every two operations, and the almost perfect certainty of the same morbid action reappearing sooner or later in the stump, or in some other part, if the patient did happen to survive. And, on the same principle, he doubted whether ovariotomy had not been employed in some cases under perfectly unjustifiable conditions, when the health and life of the patient were not immediately threatened by the stage and progress of the malady, when the tumour was a source of inconvenience and deformity, rather than a source of danger, and when the evils of the disease were as yet prospective rather than real. But if the health of the patient were becoming rapidly undermined by the disease,—if the progress of the affection showed that ere long it would inevitably prove fatal,—if the question were thus reduced to one of certain and not distant death from the course of the malady, or *possibly* an entire escape from the affection, with prolonged life and health from the operation,—and if, in addition, the ascertained or apparent freedom of the tumour from adhesions and other circumstances were such as to present no counterindication,—then Dr Simpson believed that ovariotomy might be undertaken under conditions far more justifiable and legitimate than the surgeon could possibly urge in favour of some of his stone, and aneurism, and other capital operations for pathological lesions of a similarly chronic character and course.

Lastly, Dr Simpson stated, that if betimes ovariotomy came to be recognised as a surgical operation, fit and proper in such cases of ovarian disease as he adverted to, or in others, he had no doubt the steps of the operation itself would meet with improvements. Such improvements were almost always wrought out by experience. How different is amputation now, from what it was formerly with the hot iron, or boiling pitch, to seal up the cut vessels. How comparatively safe and simple is the tying of an artery now from what it was half a century ago, with the flat double ligatures, and ligatures of reserve, &c. One great source of danger in ovariotomy was the irritation and injury inflicted on the intes-

tinal canal and peritoneum from the strong ligature which was required for the stalk of the tumour being passed through the abdominal cavity, and out at the external wound,—remaining there for days or weeks, and keeping a portion of the wound in the abdomen necessarily open by its presence, and, consequently, so far still more hazarding the occurrence of peritonitis. Probably it might be possible to devise some other measures of securing the large vessels, principally *veins*, be it remarked, of the pedicle, and thus save the several dangers arising, (1st), From leaving the ligature to irritate there; (2d), From the ligature, by its constriction of the stalk, producing strangulation; and (3d), From its exciting phlebitis. And if the ligature still continues to be employed, it would, Dr Simpson believed, be found a great improvement, as had been suggested to him by his excellent friend and assistant, Dr Keith, to pass it down, perforate the very thin layer of serous and mucous membranes dividing the utero-rectal reflection of the peritoneum from the upper and back part of the vagina, and bring it out along the vaginal canal. Dr Simpson knew that on the dead subject this could be done with the greatest facility. It would have several advantages. 1. It would enable the surgeon to close at once the whole length of the incision in the abdominal parietes; 2. The sides of the vaginal canal, being in contact, would act as a valve sufficient to prevent that dangerous access and egress of air to and from the peritoneum under strong respiration, vomiting, &c., which had sometimes occurred through the aperture kept open by the ligature, in the old form of operating; 3. The ligature would not pass through the same extent of the peritoneal cavity, and would scarcely, if at all, touch or irritate the folds of the intestinal canal; and, 4. If the uterus happened to be placed backward upon the rectum, the ligature applied to the posterior surface of its broad ligament would be included and imbedded in a cavity almost divided and separated from the general cavity of the peritoneum, and where the process of reparation and adhesion might often go on without fatally extending upwards into the general peritoneal sac. Farther, the cases already published recounted some errors which the experience derived from them showed might be avoided in future. We were thus warned to take great care to close, as accurately as possible, the peritoneal side of the wound, to prevent strangulation of a fold of intestine in its edges; to adopt precautions with the same view of not allowing a similar effect from the portion of ligature passing through the abdomen; not to allow the bladder to become much distended, lest it drag the uterus, or disturb the reparative process; not to excite inflammation by unnecessarily dragging at the ligatures, &c. &c.

Professor Simpson subsequently added a few observations in reply to some remarks made by Mr Spence. According to Mr Spence, trephining for the discovery of effused blood, and tying the arteria innominata, were not now looked upon by surgeons as justifiable operations. Probably, the Society would allow that the lately published text-books by Professors Fergusson and Syme, were fair standards of the existing state of British Surgery. Now, Mr Fergusson not only in his work advises trepanning for effused blood, but even speaks of cutting through the dura mater in search of it. Mr Syme, in treating of the ligature of the innominata, states that it is a dangerous operation, but he does not give the most remote hint as to its being regarded by him or others, as an unjustifiable one; and, on the contrary, he describes the steps of the operation, and suggests means for rendering it safer. Mr Spence had alluded to the spontaneous cure of aneurism, and thought Dr Simpson wrong in his ideas about its frequency. Dr S. did not know of any data calculated to show how often, or how seldom, the spontaneous cure of a *local circumscribed aneurism*—such as surgeons operated for—might be expected; but of 8 or 10 cases of popliteal aneurism, seen in the hospital within the last 8 or 10 years, nature set up inflammatory action in the sac or vessel, or both, and cured one case (a patient of Dr Cunningham,) before art had an opportunity of interfering. At all events, Dr S. felt assured, that if local external aneurisms were treated by common palliative measures, their spon-

taneous cure would be found not to be so rare as the spontaneous cure of ovarian dropsy; and he feared that all Mr Spence's arguments for early operation in the one case, most unwittingly applied with similar appropriateness to the other. And when, in aneurisms, art substituted her surgery for the surgery of nature, the operation was certainly by no means so safe as Mr Spence seemed to believe. Tying the subclavian for axillary aneurism, was fatal in about 1 out of every 2 operated upon. Nor was ligature even of the crural artery for popliteal aneurism, an operation of such facility and safety as some surgeons seemed to believe. In the first number of Dr Cormack's Journal, eleven cases of ligature of the crural artery for popliteal aneurism, are adverted to, as having, within a limited period, occurred in Edinburgh. It is well known, that in five of these eleven cases, the operation was followed, sooner or later, by a fatal result.

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